United States Patent [19]

Keable et al.

[11] **4,198,996**

[45] **Apr. 22, 1980**

[54] **PORTABLE CAMPER**

[76] Inventors: **Denis Keable**, 215 Horace St.; **Claude Prefontaine**, 103-1010 Brazier St., both of Winnipeg, Manitoba, Canada

[21] Appl. No.: **915,480**

[22] Filed: **Jun. 14, 1978**

[30] **Foreign Application Priority Data**

Mar. 31, 1978 [CA] Canada 300243

[51] **Int. Cl.**[2] **A45F 1/06**

[52] **U.S. Cl.** ..... **135/1 A**; 135/4 A; 135/5.1

[58] **Field of Search** ..... 135/DIG. 6, 1 R, 1 A, 135/5 A, 5.1; 5/11, 112, 113, 116, 117, 186 R, 187

[56] **References Cited**

U.S. PATENT DOCUMENTS

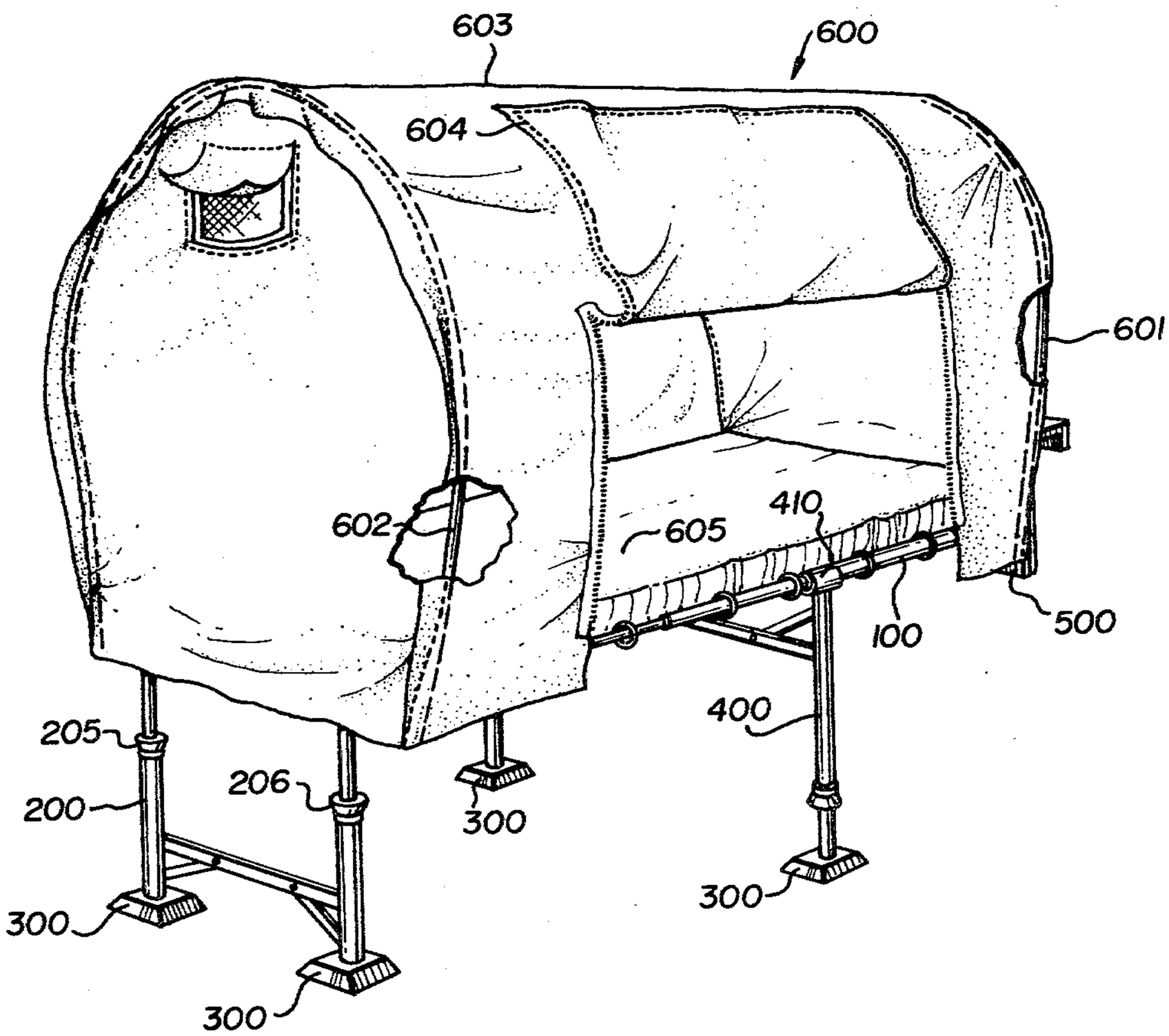
1,836,060	12/1931	Barnes	135/DIG. 6
2,239,951	4/1941	Bromschwig	5/113
2,299,382	10/1942	Creasy	135/1 A
3,115,362	12/1963	Spurrier	135/1 A
3,228,405	1/1966	Bursey	135/1 A
3,933,164	1/1976	Ness	135/DIG. 6

Primary Examiner—Reinaldo P. Machado
Attorney, Agent, or Firm—Barrigar & Oyen

[57] **ABSTRACT**

This invention relates to a tent which may be transported in an automobile trunk suitable for camping which comprises a frame comprised of first and second end members and two side members, each of the side members being of adjustable length to permit the distance between the end members to be varied and a first frame support means, upon which the first end members rests, adapted to be secured to a transportation vehicle; and a second support means hingedly connected to the second end member, such that in a compressed position it lies in substantially the same plane as the frame, and in an extended position supports the second end member, the second support means being adjustable such that the second end member may be maintained at the same elevation as the first end member.

2 Claims, 6 Drawing Figures



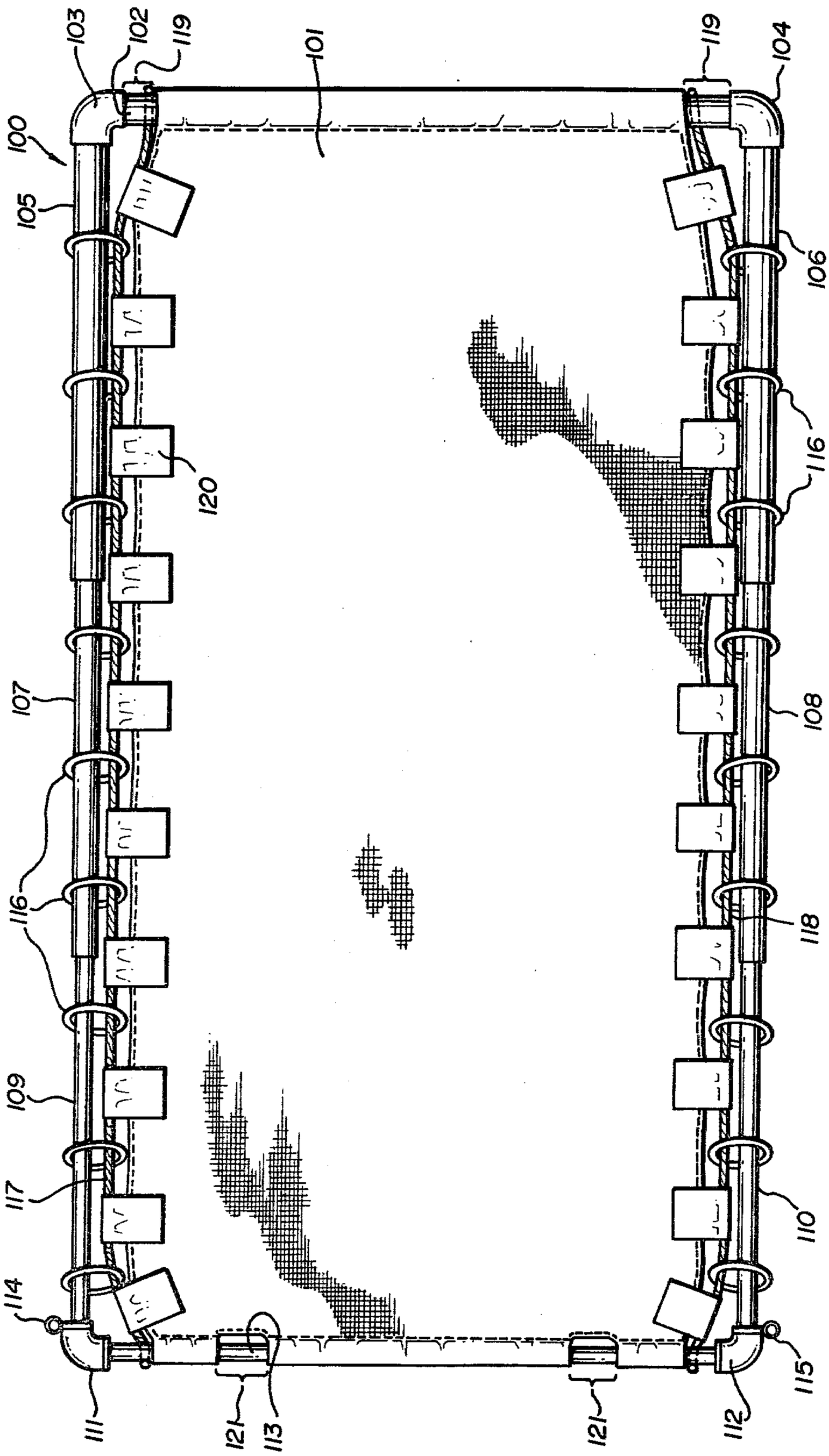

103
102
119
101
119
104
100
105
106
116
120
107
116
108
109
118
117
110
114
111
121
113
121
112
115

FIG. 1

FIG. 2

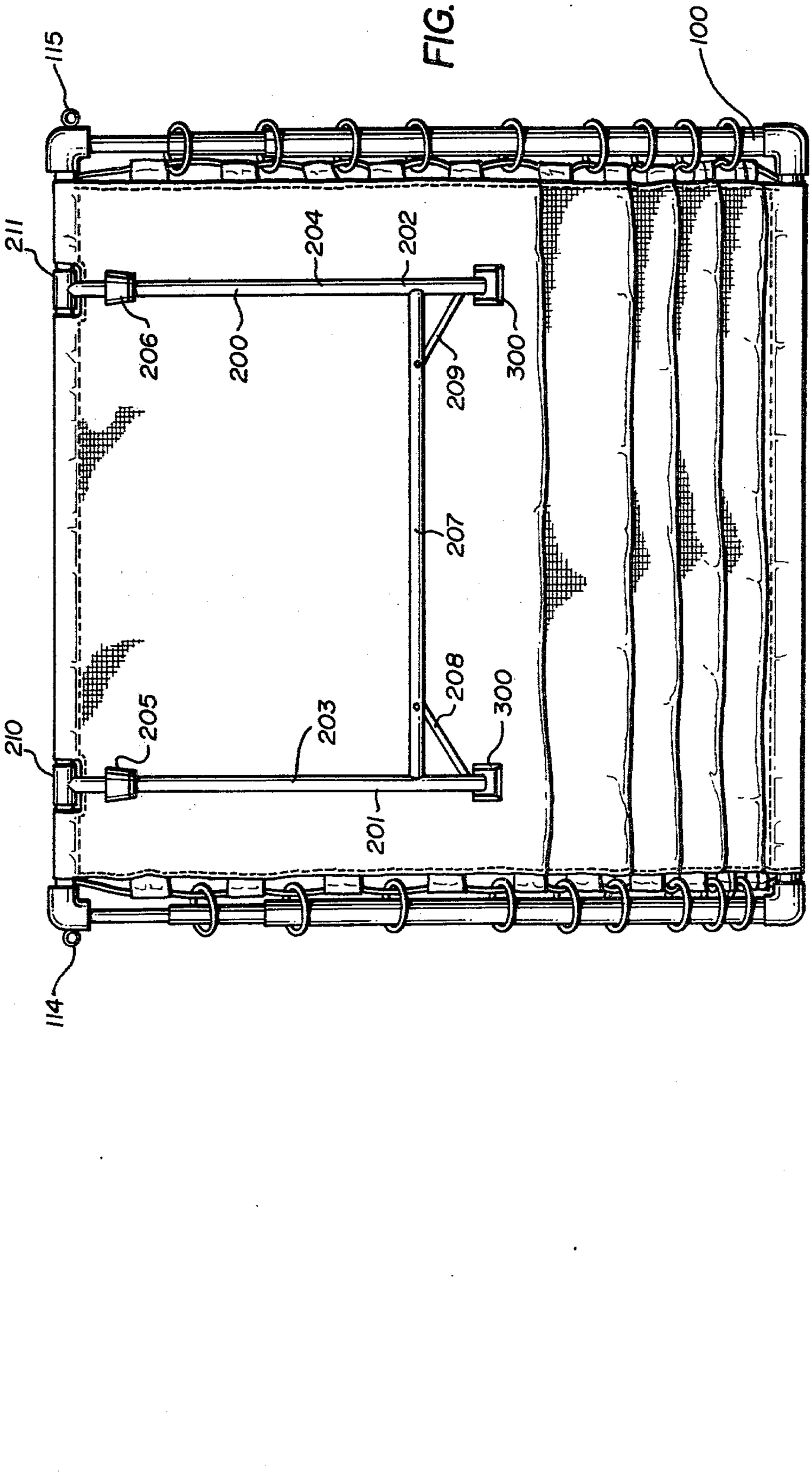

115
100
211
204
202
206
200
209
300
207
205
203
208
300
210
201
114

FIG. 5

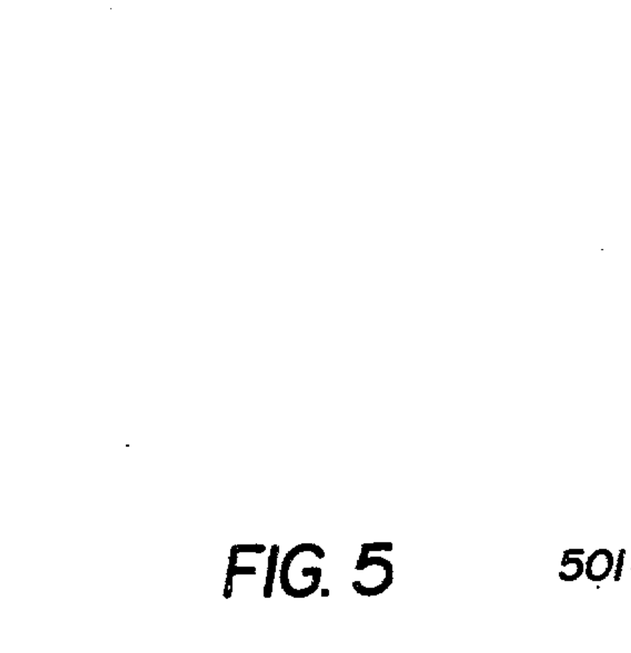
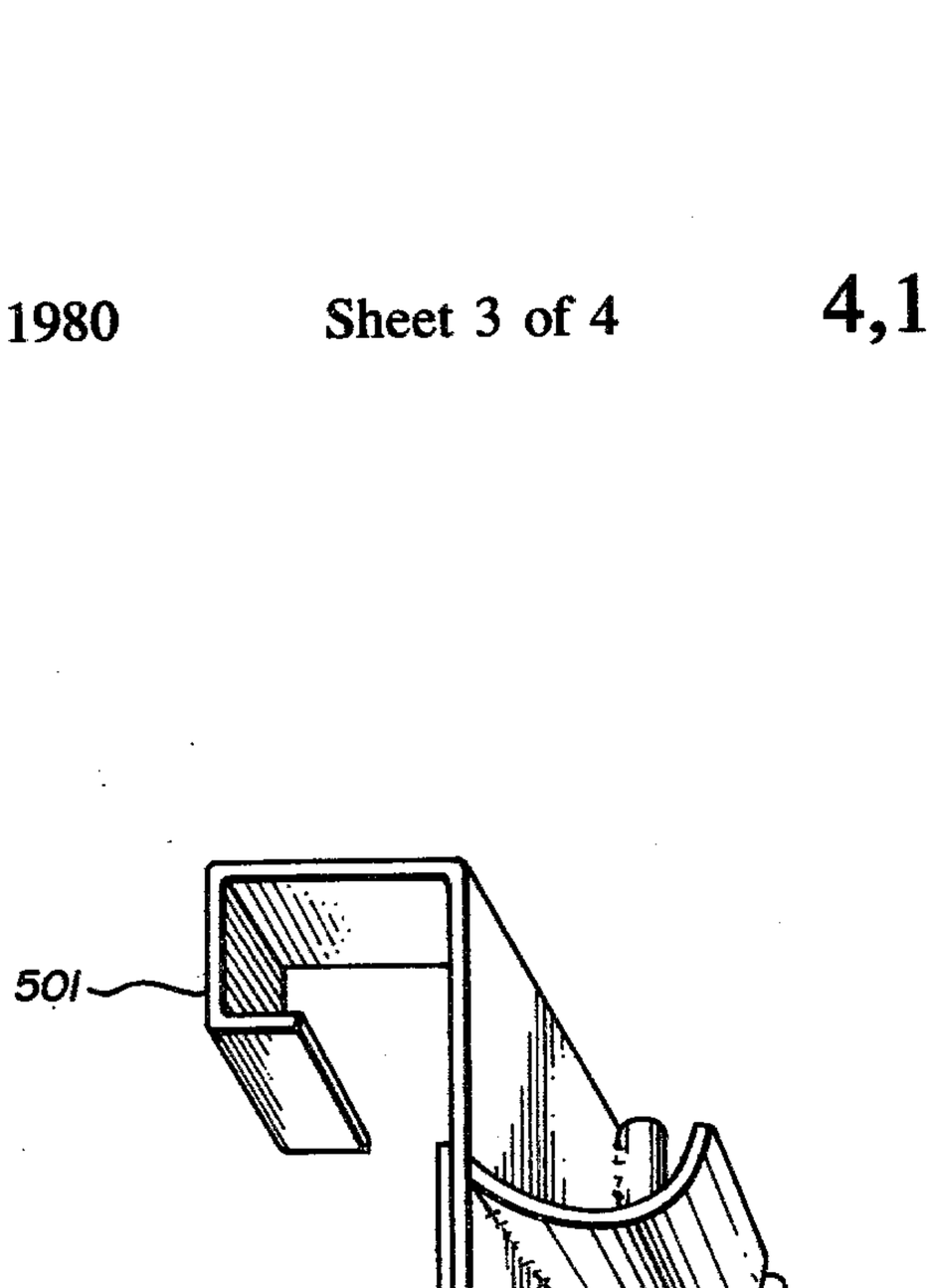


FIG. 3



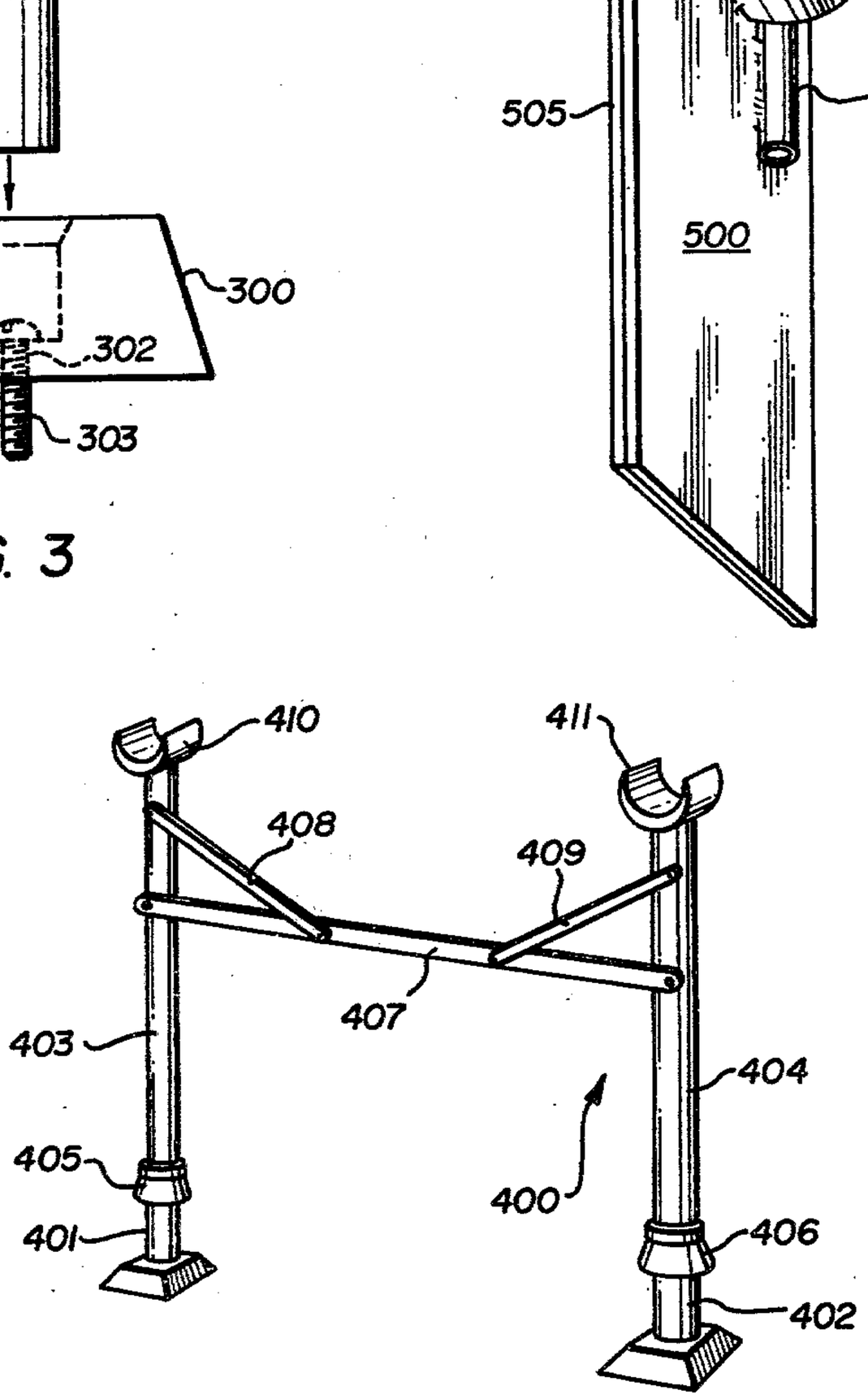


FIG. 4

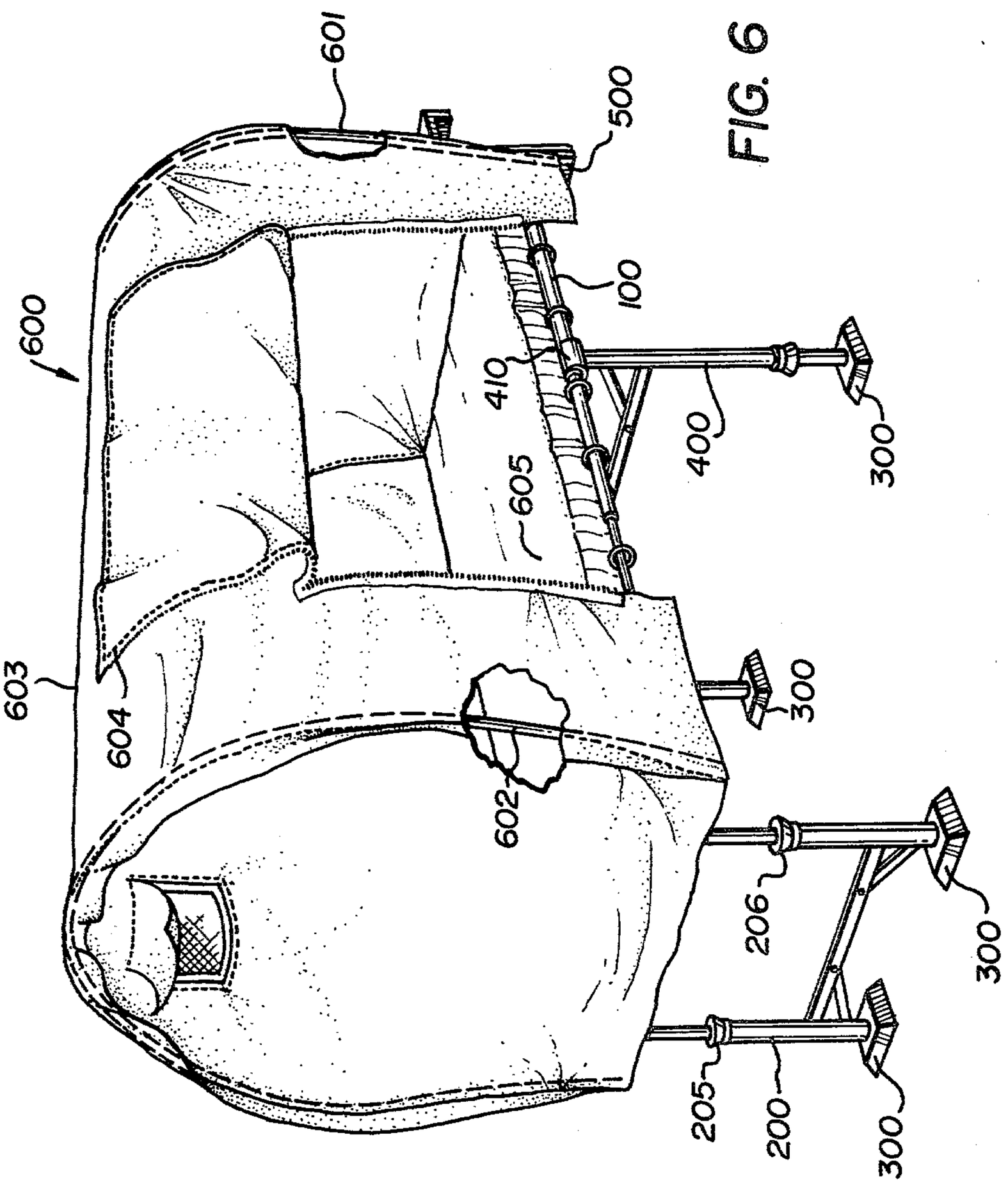

601
500
600
100
410
400
300
605
603
604
602
300
206
300
205
200
300

FIG. 6

PORTABLE CAMPER

This invention relates to a tent which may be transported in an automobile trunk suitable for camping.

BACKGROUND OF THE INVENTION

Commonly, camping tents consist of a large number of parts which require substantial time and effort to erect. Generally, commonly available tents which are transported disassembled on the roof of an automobile, or in its trunk, once erected, rest on the ground thus requiring the use of ground sheets, air mattresses, and the like, to keep out the dampness and chill from the ground, and smooth out the generally uneven terrain.

The susceptability of most ordinary tents to dampness from the ground makes them somewhat uncomfortable at all times and even less comfortable during the cool seasons in Canada. The outdoor camping shelters which offer a floor off the cold ground are generally bulky, expensive and often must be towed behind an automobile or truck. While these types of outdoor shelters are more readily adapted to cold weather camping, they are considerably more expensive than the traditional tent, and relatively complex to erect.

SUMMARY OF THE INVENTION

This invention overcomes or reduces these difficulties by providing a camper tent which, in its storage configuration, may easily be transported in the trunk of a car, quickly assembled and erected, and once erected offers the user a shelter sufficiently elevated above ground to avoid the dampness and cold from the ground and the discomfort of uneven terrain. This is achieved through the use of a rigid telescoping frame supported at one end by the bumper of a vehicle and the other end by a support frame of adjustable height which is hinged to the end of the frame so that it can be swung into the plane of the frame for storage. In addition a removable centre support frame is provided for extra strength.

In particular the invention relates to a camper frame comprising a frame which is in turn comprised of two end members and two side members, each of such side members being of adjustable length to permit the distance between said end members to be varied. The frame is supported by said first end member by a means adapted to be secured to a transportation vehicle and a second support means hingedly connected to the second end member, such that in a compressed position it lies in substantially the same plane as the frame and in an extended position supports said end member and is adjustable such that the second end member may be maintained at the same elevation as said first end member.

The camper frame may also include a means for supporting the frame at points intermediate the two end members.

The camper frame may in fact be rectangular and support from the end and side members a flexible sheet of rectangularly shaped materal which is enclosed within the rectangular frame.

Finally the camper frame is adapted with means to support a protective canopy.

IN THE DRAWINGS

In drawings which illustrate one of the embodiments of the invention;

FIG. 1 is a top plan view of the telescoping camper frame in its extended position.

FIG. 2 is a top plan view of the telescoping camper frame in its contracted position with the end support frame in its storage position.

FIG. 3 is a partly sectional view of the foot pad illustrating the position of a leg end and the protruding threaded spike.

FIG. 4 is an elevation view of the centre support frame.

FIG. 5 is a three-dimensional view of a bumper bracket used to support the head end of the bed frame.

FIG. 6 is a three-dimensional view of the assembled portable camper illustrating the use of an enclosure in the form of a chuck wagon with a side flap.

DETAILED DESCRIPTION

Referring to the drawings, FIG. 1 illustrates how the telescoping frame **100** is fitted with a canvas sheet **101** to form the floor of the camper. The telescoping frame **100** comprises a tubular structural head member **102** which accepts at each extremity one arm of corner elbows **103** and **104**. The free arm of each of the corner elbows **103** and **104** fits into tubular member **105** and **106** respectively. Tubular members **105** and **106** accept tubular members **107** and **108** which are of a diameter such that they freely slide within tubular members **105** and **106** without an undue amount of play. Tubular members **107** and **108** accept tubular members **109** and **110** which are of a diameter such that they freely slide within tubular members **107** and **108** without an undue amount of play.

In the result, tubular member **109** telescopes within tubular member **107** which telescopes within tubular member **105**. Similarly, tubular member **110** telescopes within tubular member **108** which telescopes within tubular member **106**.

The end of tubular member **109** not in contact with tubular member **107** is accepted into one arm of corner elbow **111**. Likewise, the end of tubular member **110** not in contact with tubular member **108** is accepted into one arm of corner elbow **112**. Tubular foot member **113**, parallel to and substantially equal in length to tubular head member **102**, is accepted at one end into the other arm of corner elbow **111** and at the other end in the other arm of corner elbow **112**.

In the result, telescoping frame **100** is substantially rectangular and is contractable to a first position where tubular members **109**, **107** and **105**, and tubular members **110**, **108** and **106** fit substantially within each other, and a second position in which said tubular members are fully extended. It will be appreciated that when the members are fully extended, there is still sufficient overlap remaining to provide substantial strength to the frame.

Tubular receiving pipes **114** and **115** are respectively fastened on the outer periphery of telescoping frame **100** to the arms of corner elbow **111** and **112**, which accept tubular members **108** and **110**, such that their longitudinal axis is orthogonal to the plane of telescoping frame **100**.

A plurality of rings **116** are concentrically placed over tubular members **105** to **110** of a diameter such that they are free to slide over said members. Cables **117** and **118** are threaded through the rings **116** along tubular members **105**, **107** and **109** and **106**, **108** and **110**, secured at one end to tubular head member **102** at points adjacent to corner elbows **103** and **104** and at the other to tubular foot member **113** at points adjacent to corner elbows **111** and **112**.

Canvas sheet **101** is fastened to tubular head member **102** by forming a sleeve leaving said member exposed over gap **119** adjacent to corner elbows **103** and **104**. Said canvas sheet **101** is supported along tubular members **105**, **107** and **109**, on the one side and **106**, **108** and **110**, on the other side by means of a plurality of straps **120** through which cables **117** and **118** are threaded. Canvas sheet **101** is fastened to tubular foot member **113** save for gaps **121** located between corner elbows **111** and **112** and the center of tubular member **113**.

FIG. **2** illustrates the telescoping frame **100** in its contracted position with the foot support frame **200** in its storage position. Said foot support frame **200** comprises tubular members **201** and **202** which fit telescopically into tubular members **203** and **204** respectively. Locking means **205** and **206** are provided to prevent relative movement between tubular members **203** and **201**, and **204** and **202** respectively. Cross piece **207** joins tubular members **203** and **204** to provide strength and to provide further strength is further fastened to tubular member **203** by brace **208** and to tubular member **204** by brace **209**. The result of this is that said tubular members **203** and **204** are kept substantially parallel. Tubular members **203** and **204** are terminated by hinge pipes **210** and **211** which are centered on said tubular members **203** and **204** with coincident longitudinal axes normal to the axes of said tubular members **203** and **204**. Hinge pipes **210** and **211** hinge on tubular foot member **113** in respective gaps **121** of the canvas sheet **101**. The free end of tubular members **201** and **202** fit into identical foot pads **300**.

FIG. **3** is a partly sectional view of foot pad **300**. Said foot pad **300** comprises flared bore **301** which is adapted to receive a tubular leg member such as **201** and **202**. Threaded bore **302** permits the adjustment of the length of protrusion of threaded spike **303**. Threaded spike **303** penetrates into the ground to provide good stability.

The centre support frame **400**, which supports the central portion of frame **100**, is shown in FIG. **4**. Tubular elements **401** and **402** fit telescopically into tubular members **403** and **404** respectively. Locking means **405** and **406** serve to prevent relative movement of said telescoping members. Cross piece **407** is fastened to tubular members **403** and **404** and also through braces **408** and **409** such that said tubular members **403** and **404** are kept substantially parallel and separated by the width of telescoping frame **100**. Tubular members **403** and **404** are terminated by curved guide members **410** and **411** which are respectively fastened with their longitudinal axes orthogonal to the plane formed by tubular elements **403** and **404** and cross piece **407**. Said guide members **410** and **411** are fashioned to accept tubular members **107** and **108** of telescoping frame **100**. The free ends of tubular elements **401** and **402** are terminated by foot pads **300**, as previously explained.

FIG. **5** illustrates bumper bracket **500**. Said bracket is formed with channel **501** which grips the bumper of an automotive vehicle such that plate **502** of said bracket **500** is held in a substantially vertical plane. Attached to plate **502**, with its longitudinal axis horizontal and parallel to the plane of said plate **502**, is upwardly curving flange **503**. Said curved flange **503** is designed to accept tubular member **102** at gap **119**. Also fastened to plate **502**, beside upwardly curving flange **503** and in a substantially vertical position, is tubular receiving pipe **504** which originates at the top of channel **501** and extends to a point below the base of upwardly curving flange **503**. Felt pad **505**, secured to plate **502**, serves to protect the finish on the bumper.

FIG. **6** illustrates assembled camper **600**. The user assembles said camper **600** by attaching two bumper brackets **500** to the bumper of a vehicle (not shown). The telescoping frame **100** is hooked onto the upwardly curving flanges **503** of bumper brackets **500** by means of tubular member **102** at gaps **119**. Telescoping frame **100** is then extended to its limit, foot support frame **200** is swung downwardly into its vertical support position with its legs adjusted by means of locking means **205** and **206** to conform with uneven terrain and adjust the height of the frame above the ground to provide a level configuration to frame **100**. Center support frame **400** is placed in the center of the telescoping frame **100** with its legs extending vertically downwardly with their length adjusted to conform with uneven terrain such that guide members **410** and **411** (not shown) receive tubular members **107** and **108** respectively and the frame **100** has an overall horizontal configuration. Tent or canopy poles **601** and **602** are inserted in tubular receiving pipes **504** in bumper brackets **500** and tubular receiving pipes **114** and **115** on telescoping frame **100** respectively to support canopy **603**, which for illustration purposes is shown in the form of a chuck wagon. It will be recognized that other canopy shapes and designs are possible. Tent flap **604**, which runs the length of the camper, permits easy access to the interior when the canopy **603** is erected. Foam pad **605**, which covers canvas sheet **101**, may be added to provide comfort and insulation.

In its knocked down (storage) configuration (not shown) all the parts may be placed in a box and stored in the vehicle trunk for portability.

Modifications and variants of the foregoing will readily occur to those skilled in the art. The invention is not to be construed as limited to the particulars of the proposals specifically described above, but is to be afforded the full scope defined by the accompanying claims.

What we claim is:

1. A camper frame, comprising:

(a) a frame of rectangular outline comprising parallel first and second end members and two parallel side members, each of said parallel side members being of telescopic construction and being of adjustable length to permit the distance between said parallel end members to be varied;

(b) a first frame support means, upon which said first end member rests, adapted to be secured to a transportation vehicle;

(c) a second support means hingedly connected to said second end member, such that in a compressed position it lies in substantially the same plane as said frame, and in an extended position supports said second end member, said second support means comprising a plurality of tubular elements, said tubular elements being telescopically adjustable in length such that said second end member may be supported from the ground and may be maintained at the same elevation as said first end member;

(d) a plurality of rings concentrically placed over said side members of said frame;

(e) a flexible sheet of generally rectangular configuration, said sheet further characterised by

(i) fastening means at each end of said sheet for connecting the sheet to the two end members of the frame; and

(ii) a plurality of straps attachable to the sides of the sheet; and

(f) a plurality of cables for affixing said sheet to the side members of said frame by means of alternately threading said cables through said rings and said straps and affixing the ends of the cables to the end of members of the frame.

2. A camper frame as defined in claim 1, including means attached to said camper frame for supporting a protective canopy.

* * * * *